

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2009; month=4; day=17; hr=9; min=44; sec=22; ms=338; ]

=====

Application No: 10580709 Version No: 2.0

Input Set:

Output Set:

Started: 2009-03-31 09:51:47.326

Finished: 2009-03-31 09:51:47.589

Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 263 ms

Total Warnings: 0

Total Errors: 0

No. of SeqIDs Defined: 4

Actual SeqID Count: 4

<110> VERMEIJ, Paul  
 <120> Lawsonia intracellularis 26 kD subunit vaccine  
 <130> 2003.023 US  
 <140> 10580709  
 <141> 2009-03-31  
 <150> PCT/EP2004/053342  
 <151> 2004-12-08  
 <150> EP 03104603.0  
 <151> 2003-12-09  
 <160> 4  
 <170> PatentIn version 3.5  
 <210> 1  
 <211> 32  
 <212> DNA  
 <213> Lawsonia intracellularis  
 <400> 1  
 catgccatgg atttgatgga acaggattaa ag 32  
 <210> 2  
 <211> 29  
 <212> DNA  
 <213> Lawsonia intracellularis  
 <400> 2  
 ccgctcgagc cataaccctt ttctgatac 29  
 <210> 3  
 <211> 856  
 <212> DNA  
 <213> Lawsonia intracellularis  
 <220>  
 <221> CDS  
 <222> (80)..(823)  
 <400> 3  
 atggctataa gcgattgaat aacagaaaat aacacctatg cctgaaattt tcgacgcgtc 60  
 gaaattttta gaggaaacc atg aaa aaa cta ctc ctt ttg tta tct att ctg 112  
 Met Lys Lys Leu Leu Leu Leu Leu Ser Ile Leu  
 1 5 10  
 ttt cta acc cca agt att acc ttg gcg gaa ggt aat act ttc aat gat 160

Phe	Leu	Thr	Pro	Ser	Ile	Thr	Leu	Ala	Glu	Gly	Asn	Thr	Phe	Asn	Asp		
			15					20						25			
agt	ttc	aac	aag	gct	aag	cgc	ata	ctg	caa	gat	gag	gtg	tat	tac	gac	208	
Ser	Phe	Asn	Lys	Ala	Lys	Arg	Ile	Leu	Gln	Asp	Glu	Val	Tyr	Tyr	Asp		
		30					35					40					
cac	caa	gtt	aca	cta	tac	tgc	gga	tat	gaa	tat	gat	gac	caa	aaa	agg	256	
His	Gln	Val	Thr	Leu	Tyr	Cys	Gly	Tyr	Glu	Tyr	Asp	Asp	Gln	Lys	Arg		
		45					50				55						
ata	tgt	ctc	cct	gat	gga	ttt	ata	gca	gag	aaa	cat	caa	aaa	aga	tca	304	
Ile	Cys	Leu	Pro	Asp	Gly	Phe	Ile	Ala	Glu	Lys	His	Gln	Lys	Arg	Ser		
60					65				70					75			
tat	aaa	att	gag	tgg	gaa	cat	agt	gtg	cct	gct	gag	aat	ttt	ggc	aga	352	
Tyr	Lys	Ile	Glu	Trp	Glu	His	Ser	Val	Pro	Ala	Glu	Asn	Phe	Gly	Arg		
			80						85				90				
gct	ttt	act	gaa	tgg	cgc	gaa	ggg	cat	cct	ctt	tgt	gta	gat	aat	aaa	400	
Ala	Phe	Thr	Glu	Trp	Arg	Glu	Gly	His	Pro	Leu	Cys	Val	Asp	Asn	Lys		
			95					100					105				
ggg	aaa	agt	ttc	aaa	gga	cga	aaa	tgt	gca	gaa	aaa	gta	aat	aaa	aca	448	
Gly	Lys	Ser	Phe	Lys	Gly	Arg	Lys	Cys	Ala	Glu	Lys	Val	Asn	Lys	Thr		
		110					115					120					
tat	aga	tat	atg	cag	tct	gat	atg	tac	aat	ttg	ttt	cca	gca	gtc	ggg	496	
Tyr	Arg	Tyr	Met	Gln	Ser	Asp	Met	Tyr	Asn	Leu	Phe	Pro	Ala	Val	Gly		
		125				130					135						
tct	gtc	aat	gct	gcg	aga	agc	aat	aag	caa	tac	tca	gag	tta	ctt	gga	544	
Ser	Val	Asn	Ala	Ala	Arg	Ser	Asn	Lys	Gln	Tyr	Ser	Glu	Leu	Leu	Gly		
140					145					150					155		
gtt	caa	tct	gct	ttt	gga	acg	tgt	gag	gca	aaa	ata	gat	ggg	aat	aga	592	
Val	Gln	Ser	Ala	Phe	Gly	Thr	Cys	Glu	Ala	Lys	Ile	Asp	Gly	Asn	Arg		
				160					165					170			
ttc	gaa	cca	ccg	gat	aga	gct	aaa	ggg	caa	gta	gcc	cgt	gct	gct	ctt	640	
Phe	Glu	Pro	Pro	Asp	Arg	Ala	Lys	Gly	Gln	Val	Ala	Arg	Ala	Ala	Leu		
			175					180					185				
tat	atg	gat	aaa	gag	tac	aag	gaa	tac	aat	cta	agt	cgt	cag	caa	aga	688	
Tyr	Met	Asp	Lys	Glu	Tyr	Lys	Glu	Tyr	Asn	Leu	Ser	Arg	Gln	Gln	Arg		
		190					195					200					
aga	ctt	ttt	gag	gct	tgg	agt	aat	atg	tat	cca	gtc	gat	gaa	tgg	gag	736	
Arg	Leu	Phe	Glu	Ala	Trp	Ser	Asn	Met	Tyr	Pro	Val	Asp	Glu	Trp	Glu		
		205				210					215						
tgt	aca	cga	gcc	aaa	cga	atc	gaa	tct	ata	cag	gga	aat	gaa	aat	att	784	
Cys	Thr	Arg	Ala	Lys	Arg	Ile	Glu	Ser	Ile	Gln	Gly	Asn	Glu	Asn	Ile		
220					225					230					235		
ttt	gta	aaa	aat	atg	tgt	atc	gaa	aag	ggg	tta	tgg	taa	acaaacgagg			833	
Phe	Val	Lys	Asn	Met	Cys	Ile	Glu	Lys	Gly	Leu	Trp						

acaatataaaa tactacctaa gta

856

&lt;210&gt; 4

&lt;211&gt; 247

&lt;212&gt; PRT

&lt;213&gt; Lawsonia intracellularis

&lt;400&gt; 4

Met Lys Lys Leu Leu Leu Leu Leu Ser Ile Leu Phe Leu Thr Pro Ser  
 1 5 10 15

Ile Thr Leu Ala Glu Gly Asn Thr Phe Asn Asp Ser Phe Asn Lys Ala  
 20 25 30

Lys Arg Ile Leu Gln Asp Glu Val Tyr Tyr Asp His Gln Val Thr Leu  
 35 40 45

Tyr Cys Gly Tyr Glu Tyr Asp Asp Gln Lys Arg Ile Cys Leu Pro Asp  
 50 55 60

Gly Phe Ile Ala Glu Lys His Gln Lys Arg Ser Tyr Lys Ile Glu Trp  
 65 70 75 80

Glu His Ser Val Pro Ala Glu Asn Phe Gly Arg Ala Phe Thr Glu Trp  
 85 90 95

Arg Glu Gly His Pro Leu Cys Val Asp Asn Lys Gly Lys Ser Phe Lys  
 100 105 110

Gly Arg Lys Cys Ala Glu Lys Val Asn Lys Thr Tyr Arg Tyr Met Gln  
 115 120 125

Ser Asp Met Tyr Asn Leu Phe Pro Ala Val Gly Ser Val Asn Ala Ala  
 130 135 140

Arg Ser Asn Lys Gln Tyr Ser Glu Leu Leu Gly Val Gln Ser Ala Phe  
 145 150 155 160

Gly Thr Cys Glu Ala Lys Ile Asp Gly Asn Arg Phe Glu Pro Pro Asp  
 165 170 175

Arg Ala Lys Gly Gln Val Ala Arg Ala Ala Leu Tyr Met Asp Lys Glu

180

185

190

Tyr Lys Glu Tyr Asn Leu Ser Arg Gln Gln Arg Arg Leu Phe Glu Ala  
195 200 205

Trp Ser Asn Met Tyr Pro Val Asp Glu Trp Glu Cys Thr Arg Ala Lys  
210 215 220

Arg Ile Glu Ser Ile Gln Gly Asn Glu Asn Ile Phe Val Lys Asn Met  
225 230 235 240

Cys Ile Glu Lys Gly Leu Trp  
245